SUPPORT FOR THE AMENDMENT

Claim 1 is currently amended.

Claims 11-14 are added.

The amendment to claim 1 is supported by the specification at paragraphs [0034] and [0046], as originally filed.

Claims 11-14 are supported by the specification at page 11, paragraph [0032], page 12, paragraph [0034], and page 15, paragraph [0044], as originally filed.

No new matter has been added.

Upon entry of this amendment, claims 1-14 will be pending in this application. Claims 7-10 have been withdrawn due to a Restriction Requirement.

REQUEST FOR RECONSIDERATION

Applicants wish to thank Examiner Alexander for the courtesies extended to Applicants' representative in the discussion on April 17, 2006. At that time, the above-amended range of the interstitial solution elements in the claimed titanium alloy was discussed, and the difference between the claimed titanium alloy and the titanium alloys cited in the reference were discussed. The following further expands on the discussion with the Examiner.

The rejection of claims 1-6 as obvious over Ahmed et al. (US Patent No. 5,871,595) is respectfully traversed.

The Ahmed et al. reference does not describe or suggest all of the required elements of the claimed invention. In particular, present claim 1 requires "at least one alloying element selected from the group consisting of molybdenum (Mo), vanadium (V), tungsten (W), niobium (Nb), tantalum (Ta), iron (Fe), chromium (Cr), nickel (Ni), cobalt (Co), copper (Cu) and aluminum (Al) in a molybdenum equivalent "Mo_{eq}" of from 3 to 11% by mass" and a specific equation in which the Mo_{eq} is determined. As recited in the present specification, the Mo_{eq} is an index that is an important determining factor in the stability of the β phase. Specifically,

> [w]hen the "Mo_{eq}" is large sufficiently, the stability of β phase increases so that it is likely to produce β titanium alloys. On the contrary, when the "Mo_{eq}" is small, it is likely to produce α titanium alloys. Moreover, in the intermediate region, the resulting titanium alloys are likely to be $\alpha+\beta$ titanium alloys.

(Present specification at page 2, paragraph [0004]).

In contrast, the Ahmed et al. reference does not recite nor require an index as a determining factor in the stabilization of the β phase of the alloy. Moreover, it appears that a "β single phase" alloy is not even required. For instance, as recited in column 4, lines 60-63, the reference indicates that an all "β structure" *or* an "α-β alloy" may be produced.

Further, regarding interstitial elements, the claimed invention has been amended to recite "at least one interstitial solution element selected from the group consisting of oxygen (O), nitrogen (N) and carbon (C) in an amount of from 0.5 to 3% by mass."

On the other hand, the reference recites that the disclosed titanium alloys may include "up to 0.5 wt.%" of interstitial elements, as recited in claim 7 and at column 5, lines 2-4 of the reference (i.e., "may not exceed 0.5 wt.%"). The reference also exemplifies several possible titanium alloys in Tables 1 and 2 of the reference, as a demonstration of the invention, in which all of the alloys include an interstitial content.

However, it appears that none of these titanium alloys includes an interstitial content within the claimed range. In particular, at column 4, lines 53-54, the reference recites that "[a]ll alloys except those having names ending with letter H and ExH have a total interstitial content of 0.05 wt.%, which is far below the required claimed range. Further, the reference recites that alloys having names ending with letter H and ExH only include up to "0.437 wt.%" as the total amount of interstitial elements, which is also not within claimed range. (Column 4, lines 51-52). Further, it does not appear that the reference provide any evidence of any beneficial effects of having the interstitial elements specifically within the claimed range of from 0.5 to 3% by mass.

Therefore, in light of these reasons, the claimed titanium alloy would not be obvious in view of the reference.

Accordingly, withdrawal of the rejection is requested.

Applicants further submit that claims 11-14 are novel and unobvious, since the reference does not describe or suggest a titanium alloy with the limitations of these claims.

Applicants submit that the application is now in condition for allowance. Early notification of such allowance is earnestly solicited.

Should the Examiner deem that any further action is necessary to place this application in even better form for allowance, the Examiner is encouraged to contact Applicants' undersigned representative at the below listed telephone number.

Respectfully submitted,

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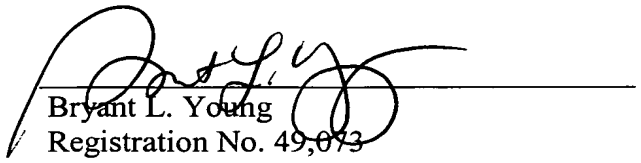
Norman F. Oblon



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